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ABSTRACT

Chapter 1 of the Education Consolidation and Improvement Act provides local school districts with federal funds to meet the special needs of educationally deprived children in high poverty areas. Because federal regulations provide little guidance for allocating Chapter 1 resources within the districts, distribution formulas vary and so do the type and level of services provided to participating schools and students. This paper addresses three major research questions concerned with the above issue, summarizes methodology (a multiple case study approach), and discusses implications for federal policymakers. As expected, the 17 districts sampled (ranging in size from 2,000 to 300,000 students) concentrated resources differently and also had varying objectives concerning appropriate scope, intensity, and design of Chapter 1 instructional programs. Only one district actually used poverty as a primary allocation criterion. Other variations and possible explanations are discussed at length. Findings provide four lessons for policymakers: (1) variations in program intensity are partly due to design differences; (2) state and local compensatory education influenced Chapter 1 allocations; (3) few districts achieved equitable distribution of Chapter 1 resources across participating schools; and (4) districts face program tradeoffs if Chapter 1 funds are reduced. Included are eight endnotes and nine references. (MLH)

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Introduction

For the past two decades, the federal government has provided funds to local school districts to meet the special educational needs of educationally deprived children living in high poverty areas. The actual allocation of funds, under both Title I of the Elementary and Secondary Education Act and its successor legislation, Chapter 1 of the Education Consolidation and Improvement Act (ECIA), involves four stages. First, the federal government allocates funds to counties within each state, using a formula that takes into account the number of low-income children in each county and the state per-pupil expenditures. Second, where county and school district boundaries are not coterminous, states distribute the money to school districts using a subcounty allocation formula based again on counts of low-income children. Third, the local school district determines which low-income schools will receive Chapter 1 resources. Finally, the district decides how these resources will be divided among participating schools and students. Because federal regulations provide little guidance in this last stage, the process of allocating Chapter 1 resources within school districts differs considerably from district to district and results in variations in the type and level of services provided to participating schools and students.

Little is known about how school districts make <u>within</u> district resource allocation decisions. Most prior research on the allocation of federal compensatory education aid focused on three areas: (1) the distribution of federal funds to local school districts (see for example, NIE, 1977; Berke, Moskowitz & Sinkin, 1976; and Berke & Kirst, 1972): (2) school selection and targeting (Gaffney & Schember, 1982; NIE, 1978); and (3) student selection (Advanced Technology, 1983; Gaffney & Schember, 1982). A recent study conducted by the authors as part of a Congressionally-mandated assessment of the Chapter 1 program[1] was designed fill this void. It examined how local school districts

allocate Chapter 1 and related resources to public schools and private school students, described the distribution of Chapter 1 resources that result from these decision processes and identified the factors that underlie these resource allocation policies.[2]

This paper addresses three major research questions examined in this study:

- To what extent do the breadth and intensity of Chapter 1 services vary across districts and what factors account for the variation?
- What criteria and decision rules do districts use to allocate Chapter 1 resources to participating schools and students and what resource allocation patterns result from these policies?
- How do districts allocate state/local compensatory education (SCE) funds to Chapter 1 and non-Chapter 1 schools and how has the SCE "exclusion" waiver affected district allocation policies?

The paper is divided into five sections. The first section summarizes the methodology used to conduct the study. Sections two through four report the answers to the three research questions. The final section discusses the implications of these findings for federal policymakers.

Study Methodology

A multiple case study approach was used to collect and analyze data on how school districts allocate Chapter 1 resources and resources for related state and local compensatory education programs. Site visits were conducted in 17 school districts across eight states. Three selection criteria were used to select the states and districts within states: the presence or absence of a state compensatory education program; the size of the local school district; and the degree of poverty present in the district. In addition, in order to insure the existence of resource allocation patterns among schools within a district, a

site had to have a minimum of five schools. This requirement eliminated most districts with fewer than 2500 students.

Our final sample of districts ranged in size (from 2,000 to over 300,000 students), poverty (from 6 to 37 percent poverty), urbanicity and region of the country. Because we used a purposive sample, our districts tend to be larger, poorer and more racially and ethnically diverse than school districts nationally. The districts in this study are typical, however, of the kinds of districts that educate the majority of students in the country and that must make complex Chapter 1 resource allocation decisions. Therefore, while caution must be exercised in generalizing from the findings of this study to all school districts that participate in Chapter 1, the sample does allow generalizations about how and why districts make certain kinds of resource allocation decisions and the factors that explain resource allocation outcomes across and within districts.

Site visitors spent from one to three weeks in each of the 17 districts, collecting both qualitative and quantitative information on how resource allocation decisions are made; the factors affecting the decision-making process, including change variables; the decision rules used to allocate resources to Chapter 1 schools and students; and the actual distribution of Chapter 1 and other compensatory education resources across schools. To the extent possible, data on context, process and decision rules were obtained for three points in time: 1980-81, 1982-83 and 1985-86.

The Chapter 1 project, the distinct instructional mode for service delivery within a content area, was the central unit of analysis for examining resource allocation outcomes within districts in 1985-86. Projects were defined using four criteria: (1) source of funding (Chapter 1, state/local compensatory education or multi-funded); (2) subject matter (reading, mathematics, bilingual/ESL and other); (3) grade level (pre-kindergarten, kindergarten, elementary, junior high or middle school, and high school); and (4) setting (in-class, limited pull-out,

extended pullout, replacement and add-on). Thus, a project within a school was defined as "an elementary reading, limited pull-out project funded by Chapter 1." For each project-within-school, we identified the number of students served by grade and the number of teachers and instructional aides assigned to the project.

Breadth and Intensity of Chapter 1 Services

A major resource allocation decision facing school district is determining what level of services should be provided to what number of Chapter 1 schools and students. Local school districts must decide how many of the potentially eligible Chapter 1 schools and students they wish to serve (breadth of service) and the intensity of services to be provided to the participants (e.g., how much service students receive and how concentrated these services are). Under both Title I and Chapter 1, districts must concentrate services on programs that "are of sufficient size, scope and quality to give reasonable promise of substantial progress toward meeting the special educational needs of the children being served..." (ECIA, Sec. 556(b)(3)). They may (1) limit Chapter 1 projects to a small number of schools; (2) limit services to a small number of the most educationally deprived children in a greater number of schools; and/or (3) offer instructional services in only a few general instructional areas. These decisions are subject to the law's school and student eligibility provisions which give districts a number of options in how they identify and select Chapter 1 participants.

While each district is supposed to concentrate its Chapter 1 resources, the law neither imposes concentration standards (e.g., a minimum per pupil expenditure or teacher case load) nor numerical standards limiting the number of eligible children that can be served.[3] Since districts have a fixed amount of Chapter 1 funds to allocate, they often face tradeoffs between breadth and intensity of services. For example, some districts choose to

"concentrate resources" by providing intense compensatory education services to a limited number of eligible schools and/or students. Other districts choose to "spread resources" across their Chapter 1 population by providing more limited services to a relatively larger proportion of their students.

The school districts in our sample had different goals and objectives concerning the appropriate scope, intensity and design of Chapter 1 instructional programs. Nine of the 17 sample districts designed programs providing relatively intensive services to a limited number of participants.[4] Another district chose to provide less intense services to a higher percentage of the eligible schools and students; three districts served small percentages of students with limited intensity; and three more were able to provide intense services to a relatively large number of students.

The districts use different combinations of targeting and program design decisions to establish the scope and intensity of their Chapter 1 programs. For example, the one district with a high breadth/low intensity program serves all schools above the district average poverty level and serves all elementary school students (K-6) who score below the 50th percentile in either reading or math. At the secondary level (7-12), student eligibility is lower: the 25th percentile. Nearly 30 percent of the public school population receives Chapter 1 services. In order to serve this many students, the district relies heavily on aides and the average staff case load is 100:1.

In contrast, the districts that choose to provide more concentrated resources to relatively fewer students use targeting options that limit the number of schools and/or students served. One district, for example, serves only the highest poverty schools and students below the 35th percentile, but places the Chapter 1 program in all grades, K-12. The district uses only Chapter 1 teachers (no aides) and the average case load is 43:1. Another district, however, limits its services by grade span, rather than relative school poverty. It uses the 25 percent rule

to serve all of its elementary schools but only serves students up to the 35th percentile in grades 1-5 (and 1-4 in two of the eight elementary schools). There are no Chapter 1 aides and the average case load for Chapter 1 teachers is 38:1.

The variations in breadth and intensity across the districts in our sample are explained by a number of factors, including differences in educational philosophy and the availability of state compensatory education funds. A philosophical belief in the efficacy of early intervention led many of our districts to limit services to elementary schools only; or to provide services in more subjects, for longer periods, in smaller groups to their youngest participants; and/or to serve relatively higher percentages of students in lower grades. In a few districts, belief that only teachers, and not aides, can provide high quality services tended to limit the number of program participants to fewer than would have been served had a greater number of lower-salaried aides been hired instead. A few districts favored intensive replacement projects over limited pull-out programs because of a strong belief in close coordination of regular and compensatory services or because they believed this was a more effective way to serve students with limited proficiency in English.

The availability of sizeable state compensatory education (SCE) funds enabled two districts to provide intense compensatory education services to a large number of students, while in another state these funds supported a very intensive replacement program for 80 percent of the Chapter 1 participants. State regulations concerning the use of SCE funds in a third state affected the way that two districts allocated Chapter 1 funds. One district concentrated Chapter 1 resources in its poorest schools and used SCE funds to serve the remaining Chapter 1 eligible buildings. Another district limited Chapter 1 services to one subject area, supporting a second area with SCE dollars.

We also found that the type and level of services provided to Chapter 1 students varied across Chapter 1 projects in many of

our sample districts. Generally, more intense services were found in pre-kindergarten and bilingual/ESL projects than in reading and math; in replacement projects than in pull-out or in-class settings; and in elementary than in secondary school programs. We found similar staffing patterns in Chapter 1 reading and mathematics projects in the majority of our sample districts.

A related research question concerned the impact of budget changes on the relative breadth and intensity of Chapter 1 services in the districts. During the period 1980-81 through 1985-86, school districts in our sample had the opportunity to change the relative breadth and intensity of their Chapter 1 programs, especially in response to fluctuating allocations. Ten of the 17 districts in our study had their Chapter 1 allocations cut at some time during this period. Although the level of reductions ranged from 10 to 38 percent in real dollars, all but one district acted to maintain the integrity and intensity of their instructional programs. Districts with relatively small reductions (less than 25 percent) dropped support services, cut the time of aides, and marginally reduced the number of schools or the number of students served in the program. Districts with larger reductions (30 to 38 percent) took further actions to maintain the intensity of services to the elementary grades (including pre-kindergarten and kindergarten) by reducing or eliminating services to secondary schools and by reducing the number of elementary schools and/or elementary school students served. Only one district reduced the intensity of services in order to maintain the number of students served, and this was accomplished by reducing the number of aides and increasing the case load of Chapter 1 teachers.

When faced with stable or small increases in their Chapter 1 allocations (less than 25 percent in real dollars), districts generally maintained the breadth and intensity of their programs. Changes in either of these two factors tended to result from changes in program design, such as the implementation of

resource-intensive replacement and/or pre-kindergarten programs. Districts with moderate or large allocation increases (25 percent or more) reacted in different ways, depending on the relative intensity or breadth of their program at the time of the increase. Districts with intense programs tended to use new funds to increase program breadth. Districts that already served a large percentage of their students used increased allocations to increase program intensity.

Allocation of Resources Within School Districts

School districts that participate in the Chapter 1 program must also decide how to allocate Chapter 1 resources to participating schools and students. In the early years of Title I, Program Guide No. 44 required that programs provide relatively higher concentrations of services in areas having the highest incidence of poverty. Program Guide No. 44 was subsequently cancelled and there were no regulations governing within district distribution of Title I resources until 1978. In 1975-76, only 45 percent of the school districts "attempted to distribute Title I resources to match the number of students receiving Title I services in particular schools" (NIE, 1978). Districts using an "ad hoc" process based their school level allocations instead on a variety of considerations: previous allocation levels, program priorities, space and principal/central office relationships (Goettel, Kaplan & Orland, 1977).

In 1978, Congress enacted Section 124(e) of Title I, which required that Title I funds be allocated to participating schools "on the basis of the number and needs of children to be served." By 1981, about 75 percent of the districts surveyed in the District Practices Study reported allocating Title I funds to schools according to "the number of students selected for Title I services." Eleven percent of the districts considered school poverty levels and 19 percent considered "more informal judgment

of needs" in making allocation decisions (Gaffney and Schember, 1982).

The "numbers and needs" provision was eliminated under Chapter 1, however, leaving districts with broad discretion in how they distribute resources to Chapter 1 public schools and students.[5] In this section, we describe the criteria and decision rules used by our sample districts in allocating Chapter 1 resources to participating public schools and students and examine how the actual distribution of Chapter 1 resources was related to the needs of the schools and students served.

Rules for Allocating Chapter 1 Resources to Schools and Students

The districts in our sample used a variety of "allocation rules" to allocate Chapter 1 resources to participating schools and students. These unwritten rules (which we derived from the decisions the districts made in allocating resources) encompassed decisions about the "unit" of Chapter 1 resources to be allocated (e.g., instructional staff, Chapter 1 projects, Chapter 1 dollars, supplies and equipment, etc.) and about how the units should be allocated (e.g., uniform allocations to each building, average staff case load, school poverty level, etc.).

Allocation based on educational need. Fifteen of the 17 districts in the study used educational need as a criterion for allocating at least a portion of their Chapter 1 resources; ten used this criterion exclusively. The districts differed, however, in how they related resources to need and in how they measured need. These decisions, which are illustrated in the vignettes below, ultimately determined the number of eligible students who were served in a school and/or the intensity of services available to participating students in the school.

- District 1 uses rigid case loads (40:1) for allocating Chapter 1 teachers to Chapter 1 schools and for selecting Chapter 1 participants. The number of staff allocated to a Chapter 1 school is based on the number of educationally disadvantaged children, measured by

performance below the 35th percentile in reading and/or mathematics (duplicated count). No teacher is supposed to serve more than 40 students. A teacher will be split across two schools if necessary to maintain this case load. Schools then select students for services using a "bottom-up" approach until a teacher's roster is filled. Because the number of students in need of services in each school are not necessarily in multiples of 20 or 40, the cutoff score for services varies somewhat from school to school, but most of the students below the 35th percentile are served.

- In District 2, staff are allocated to schools using an informal case load ranging from about 40 to 50 students (duplicated count) per teacher. More staff are assigned to grades K-3, "emphasis" grades in the district. Each teacher's actual case load will vary, however, since schools must serve all eligible students, regardless of the level of resources allocated.

- District 8 allocates staff in proportion to the number of students below the 50th percentile in either reading or math (unduplicated count), although it never has enough resources to serve this number of students and it uses a duplicated count to select participants. Since the district enforces fairly uniform class sizes, the number of Chapter 1 teachers allocated to the schools drives the number of students served. A uniform cutoff score is not established across grades or across schools, however. Project participants are selected by giving priority to the lowest scoring students in grades 1-4. If fifth graders can be reached without driving cutoffs too low, then they will be served.

Allocation based on school-level poverty. Only one district in our sample used poverty as the primary criterion for allocating Chapter 1 resources. The basic approach, developed in the late 1960s, is to allocate Chapter 1 projects based on poverty. The four poorest schools receive the maximum mix of projects--all three subject areas plus pre-kindergarten, counseling and other support staff. The rest of the Chapter 1 schools are assured of a reading program. Since projects come with a consignment of staff, poor schools receive more Chapter 1 staff.

Uniform allocation of Chapter 1 resources. Five districts allocated at least some of their Chapter 1 resources uniformly across participating Chapter 1 schools; only one district used

this approach alone. This latter district allocates one teacher and one aide to each participating Chapter 1 school. No itinerant staff are used because of the geographic separation of schools.

In the other four districts, only some of the Chapter 1 staff are allocated on a uniform basis. In District 15, for example, each school receives one teacher and one aide to staff the pullout reading program. Instructional aides, who staff the pre-kindergarten, kindergarten and in-class reading/mathematics/language arts projects, are allocated using a case load formula based on the estimated number of Chapter 1 participants. District 17 allocates in-class reading aides and ESOL teachers and aides based roughly on the number of students needing services, but gives each school a uniform allocation of one reading teacher and aide and one math teacher and aide to staff the pullout (or replacement) reading and math programs.

Multiple projects and multiple allocation rules. Twelve of the 17 sample districts (generally those with fewer than 10,000 students) used one rule for allocating all instructional resources to Chapter 1 schools. The larger districts tended to use multiple allocation rules. That is, different rules were applied to different Chapter 1 projects within the district. In some cases, the use of multiple allocation rules reflected the Chapter 1 decision-making structure, where separate program directors (e.g., reading, math, ESOL) were responsible for resource allocation rules as well as CHapter 1 program designs.

Districts using multiple allocation rules have two kinds of decisions to make: (1) how projects should be allocated across Chapter 1 schools and (2) how resources should be allocated to the projects. The interaction of these two decisions drives the level and type of resources ultimately allocated to Chapter 1 schools. Three of the five districts involved allocate all Chapter 1 projects (with the exception of pre-kindergarten) to all Chapter 1 schools, but use different allocation rules to allocate resources to these projects. District 15's policy of

using different allocation rules for pullout reading projects and for instructional aides, mentioned above, is an example of this approach. The other two districts allocate different numbers of projects to Chapter 1 schools as well as different resources to projects. Schools receive a baseline of services (generally one reading and one mathematics project) and additional projects are allocated based on educational need, school poverty, or other factors.

Other allocation criteria. Administrative and political criteria acted as constraints on the operation of these allocation rules in some of our districts. For example, there was a tendency in some of our districts to make only marginal changes in the allocation of projects and/or staff across Chapter 1 schools, even in the face of changing needs in the schools (incremental decision-making). In other districts, lack of facilities and/or "principal willingness" affected the number and type of projects housed in a Chapter 1 school (e.g., space for pre-kindergarten or computer labs or the willingness of principals to participate in Chapter 1 replacement programs) and thus the number and type of Chapter 1 resources allocated to that school.

Politics did not play a direct role in resource allocation policies in any of our sample districts. In no case did a school get extra Chapter 1 resources because of pressure from a building principal, parents group or school board member. Requests for additional resources had to be supported by documentation of additional educational need. In fact, the Chapter 1 director of the largest district in our study noted that the highly bureaucratic resource allocation processes in his district helped shield central office staff from political pressures in the community.

The Distribution of Chapter 1 Resources within Districts

The resource allocation rules that a school district uses affect how equitably Chapter 1 students are treated within that district. For example, assume that two Chapter 1 schools in a district enroll 50 and 100 students, respectively, who are eligible to receive Chapter 1 reading services. If the district allocates one Chapter 1 teacher to the first school and two Chapter 1 teachers to the second (an allocation rule that takes educational need into account), the schools should be able to provide comparable services to their students: teacher-based Chapter 1 services with a case load of 50 students per teacher. If the district allocates one teacher to each school (a uniform allocation rule), however, the second school faces a dilemma: serve all eligible students with a less intense service (case load of 100:1) or maintain the intensity of service and leave one-half (50) of its students unserved. In either case, the level of services will be inequitable.

To determine how equitably Chapter 1 resources were actually distributed in our sample districts, we determined how four measures of Chapter 1 resources--number of Chapter 1 projects in a school, number of Chapter 1 staff, average case load and per pupil expenditures[6]--were distributed across participating schools within each district. We then related the distribution of resources to the economic and educational characteristics of the participating schools to see whether high need schools receive at least as many Chapter 1 resources as less needy schools.[7]

Most of the districts in our study allocate different levels of total resources (e.g., number of Chapter 1 staff) to their Chapter 1 schools. (In a few cases, the range in staff is narrow because some staff, particularly teachers, are allocated uniformly across schools.) When the number of staff is related to the number of Chapter 1 participants in each school, however, we found a wide range in the average case load for Chapter 1

teachers across schools in 13 or our 17 districts. Schools with the highest case loads tended to have case load that were two to four times as large as the schools with the lowest case loads. For example, the range in District 5 is 55:1 to 110:1; in District 4 is 31:1 and 88:1 and in District 17 is 35:1 to 145:1. The same patterns emerged when we examined the distribution of per pupil instructional expenditures across Chapter 1 schools.

We found that in many districts the actual allocation of Chapter 1 staff was only randomly related to the educational or economic needs of Chapter 1 schools. Less than one-half of our sample districts allocated more staff to Chapter 1 schools with relatively higher levels of poverty or higher concentrations of Chapter 1 students. A non-random relationship between the number of staff and student achievement existed in only two districts. Variation in staff case loads across Chapter 1 districts also tended to be randomly related to poverty, achievement and Chapter 1 concentrations in the schools. In those districts that are exceptions, the general pattern was for case loads to be higher in schools with relatively greater needs.

Analysis of the case study data from the 17 sites revealed four factors that appear to explain the lack of, or the negative, relationships between the distribution of resources and the educational needs of the participating schools. These factors are: (1) the extent to which need criteria are embodied in the district's resource allocation rules; (2) the relationship of the need measure used to the actual building-level need; (3) the differential accretion across schools of Chapter 1 projects with different allocation rules; and (4) the degree of building-level discretion in designing programs and selecting Chapter 1 students.

The first factor that explains the strength and direction of a relationship between resource allocation patterns and need measures is the extent to which a need measure is embodied in a district's allocation formula. For example, we did not find a positive relationship between any measure of need and the number

of staff allocated to a school when the district used a uniform allocation rule to distribute most of its Chapter 1 staff. In those districts where schools then chose to serve as many eligible students as possible, the resulting case load (and thus intensity of services) varied widely. In one district this range was 44:1 in the lowest poverty schools to 116:1 in the highest poverty schools. In those districts where schools limited the number of students served in light of limited staff, the average case load for Chapter 1 staff was similar across schools, but high need schools left larger numbers of students unserved.

A second explanatory factor is a mismatch between the measure of need in the allocation formula and actual building-level need in those districts that allocate all of their Chapter 1 resources using a specific need criterion. This mismatch could take one of three forms.

First, some districts used one measure of need to allocate resources to schools and a different measure of need to select students. Second, because many districts used only a rough case load formula to allocate resources, some schools did not receive enough resources to serve all their eligible students. If the district did not then hold the buildings to a case load standard, high need schools might respond by serving more students with a less intense program. Finally, the degree to which resources will matched needs was affected by a district's willingness to make incremental allocations of staff. For example, if a district has a policy that allocates one Chapter 1 teacher for every 50 students, it cannot maintain equitable services unless it is willing to allocate a portion of a teacher (e.g., 0.2 FTE) for every 10 students that exceed the case load limit. Yet, most of our sample districts, particularly those with geographically dispersed schools, were reluctant to assign a Chapter 1 teacher to more than one building.

A third factor that accounts for a random relationship between Chapter 1 resource distributions and school characteristics is the differential accretion of projects across Chapter 1

schools, particularly in the larger districts. When this accretion is combined with the use of multiple allocation rules within a district, disparities in the distribution of total Chapter 1 resources can occur across buildings. A disaggregated analysis of individual Chapter 1 projects in the largest districts in our study showed that the wide range in resources across Chapter 1 schools and the lack of a consistent relationship between this variation and differences in the educational needs of the buildings could be explained by (1) the way that projects are allocated across schools; (2) the complement of staff allocated with each project; and (3) the amount of discretion that a building has, and how that discretion is used in determining the case load for each project.

The final factor affecting resource allocation patterns is the amount of discretion that building-level personnel have in allocating Chapter 1 resources within their schools. In three of our sample districts, the central office allocates Chapter 1 resources to the schools, but then gives the schools responsibility for designing Chapter 1 programs. School personnel can determine what type of staff they need and want; and/or which students receive services, in which subject matter areas, how many minutes a day and how many days a week. As a result of this discretion, the allocation of Chapter 1 resources to students within buildings may vary considerably across schools within a district or across students within schools during the school year.

The Relationship of Chapter 1 to State Compensatory Education Programs

The way in which a district allocates Chapter 1 resources may also be affected by the availability and operation of other special needs program, especially state or local compensatory education (SCE). Federal legislation concerning the relationships between Title I and then Chapter 1 and SCE has reflected

Congress' desire to encourage states to enact SCE programs.[8] Congress has not minded if the states, in doing so, also made eligible for SCE educationally deprived children in the non-poor areas of school districts or, since SCE and Title I/ Chapter 1 services were similar, if an individual student's compensatory education program were funded by Title I/ Chapter 1, SCE, or a combination of the two.

Under Title I, however, Congress was concerned that disproportionate amounts of SCE funds not go to non-poor areas of school districts. Thus Title I required that students eligible for Title I, in the aggregate, receive their proportionate fair share of SCE resources, unless the district qualified for a "fully funded" exemption. Chapter 1, however, eliminated the this "fair share" requirement and authorized an exclusion from the supplement, not supplant provision for state and local compensatory education funds. In states and districts using the exclusion option, this change may alter how both Chapter 1 funds and state and local funds for compensatory education are allocated to schools.

Eleven of our seventeen sample districts provide some kind of state or local compensatory education program. SCE funds interacted with Chapter 1 in various ways in these districts. Six of the districts use a multi-funding model. These are programs where two or more funding sources (usually Chapter 1 and SCE) jointly fund a program serving one group of students. In a multi-funded program one cannot distinguish students by funding source in Chapter 1 schools. In many cases, the lines between resources bought by the different funding sources are also blurred. The other five districts used SCE funds to serve Chapter 1 eligible, but not served, schools or children; to provide services in different program areas; or to provide services to Chapter 1 participants at different times of the day (e.g., tutoring before or after school). These different approaches reflected state requirements concerning the use of SCE funds; educational philosophy of the school district; the

district's implementation and interpretation of state regulations; the tradition of Chapter 1 services in the district; and local program administration.

We found no evidence that districts in our sample consciously reallocated SCE money to non-Chapter 1 areas as a result of the changes in Chapter 1. In the four states in our study that had SCE programs prior to Chapter 1, state Chapter 1 directors indicated that their local districts were either not allowed to use the supplement, not supplant exclusion for SCE funds or that state requirements for the distribution of SCE funds met the old Title I requirement.

The one state in our sample that enacted SCE legislation after the passage of Chapter 1, however, designed its SCE program with the exclusion in mind. A state official told us that nearly all of the districts in the state (although not one district in our sample) use the exclusion. Typically, the Chapter 1 eligibility cut-off score is lower than that for the SCE program. Those who qualify for Chapter 1 do not receive SCE services. All other children who score below the SCE cut-off, whether they are in Chapter 1 eligible or other schools, receive SCE services.

The quantitative data collected in this study are insufficient to determine whether the districts in our sample meet the "fair share" requirements of Title I. However, an analysis of the allocation policies in effect in our districts leads us to suspect that Chapter 1 eligible students in some of our sample districts may not be receiving the share of SCE services that Title I would have required.

Two of the districts use allocation formulas that are specifically designed to insure that students in Chapter 1 schools receive their "fair share" of SCE funds. One uses a formula that relates the number of SCE-funded staff assigned to Chapter 1 elementary schools to the percentage of students in those schools who are eligible for the SCE program; the other allocates the same per pupil expenditure to every student

eligible for state-funded remedial services, regardless of the Chapter 1 status of the school.

Two districts follow state regulations that require them to place at least 50 percent of the SCE funds in Chapter 1 eligible schools. This may or may not meet the Title I "fair share" distribution requirement, depending on whether more than 50 percent of the educationally deprived children, who are also eligible for SCE, reside in Chapter 1 eligible attendance areas.

Another district, however, that uses a multi-funded allocation formula, directs relatively more SCE resources to non-Chapter 1 schools. The district provides the same services in Chapter 1 and SCE schools to students with comparable needs. Since the district multi-funds these services in Chapter 1 schools from both Chapter 1 and SCE funds, but pays for them in SCE schools totally out of SCE funds, students in SCE schools who receive these services are getting approximately twice as much from SCE as are students in Chapter 1 schools. In fact, 80 percent of the SCE-eligible students attend Chapter 1 schools, but only 67 percent of the SCE-funded instructional staff were allocated to these buildings.

Implications for Federal Policy

Under Chapter 1, school districts have a great deal of discretion in how they allocate federal compensatory education resources. This discretion has resulted in a wide range in the breadth and intensity of Chapter 1 services across school districts and a great deal of variation in how districts allocate resources to participating schools and students. Policymakers have expressed concern about this variation and its impact on the delivery of services to Chapter 1 participants. The findings from this study of Chapter 1 resource allocation provide four lessons for policymakers interested in addressing these variations.

First, variations in program intensity among districts are caused in part by differences in program design (e.g., different staffing mixes, case loads, settings, etc.) and in part by the increasing variety and complexity of Chapter 1 programs in operation throughout the country. Chapter 1 programs contain different mixes of projects (e.g., pre-kindergarten, kindergarten, bilingual/ESL and basic skills replacement projects, as well as the traditional reading and math pullout projects) that bring with them different configurations of staff. When examining variations in per pupil expenditures across districts, policymakers must be sensitive to the fact that Chapter 1 is no longer primarily a reading program. It is hundreds of different programs designed to meet the needs of individual school districts.

Second, policymakers should not discuss differences in the breadth and intensity of Chapter 1 services among districts without considering the impact of state and local compensatory education services on the allocation of Chapter 1 resources. Districts in our sample that received state compensatory education aid generally used these funds to extend the range and/or to increase the intensity of compensatory education services. While the state compensatory education "exclusion" waiver in Chapter 1 did not lead to a conscious reallocation of SCE dollars away from Chapter 1 attendance areas in our districts, experiences in our districts point to two different directions that districts might move in the future. The waiver could encourage districts to make greater use of unified, or "multi-funded" compensatory education programs, where students in need of remediation would receive comparable levels of service regardless of the Chapter 1 status of their school, or the waiver could lead districts to exempt Chapter 1 participants from participation in SCE-funded programs, resulting in a situation where Chapter 1 attendance areas would receive few SCE resources.

Third, while most of the districts in our study incorporated some measure of need in their subdistrict resource allocation

formulas, few actually achieved an equitable distribution of Chapter 1 resources across participating schools. If a more equitable allocation of Chapter 1 staff is a goal of policymakers, they must insure that the following conditions are met in a district: (1) Chapter 1 projects are allocated based on the relative need of Chapter 1 schools; (2) Chapter 1 staff are allocated within projects in fractions of FTEs and in direct proportion to the number of eligible students; (3) the measure of need used in the allocation rule is the same, or close to, the measure used to select students; (4) staff allocations are based on duplicated, not unduplicated, counts of students; and (5) schools adhere to strict case loads.

Finally, district responses to changes in Chapter 1 allocations in the early 1980s reflected a number of factors, including the existing scope and level of services, availability of carryover funds, and extent of budget cuts in the past, but tended to involve reductions primarily in non-instructional services. Districts may face a different set of tradeoffs if Chapter 1 allocations are reduced in the future, however. Districts in some states are under pressure to reduce the level of Chapter 1 funds they carry over from one fiscal year to the next, limiting their ability to use carryover funds to stabilize programs. Having cut non-instructional services in the past, many districts no longer have the option of saving money by eliminating support services, and will have to cut parts of their core instructional program. And, as districts with larger programs expand the number of staff-intensive Chapter 1 projects (e.g., pre-kindergarten, bilingual/ESL, basic skills replacement programs), they may be forced to make tradeoffs among different types of instructional programs: pre-kindergarten versus elementary; replacement programs versus pullout; reading or math versus bilingual/ESL.

Endnotes

1. In December 1983, Congress required the U.S. Department of Education to conduct a National Assessment of Chapter 1. The National Assessment, which is providing information for reauthorization of the program this year, commissioned eight major studies: a review of research on the effectiveness of program design features used in compensatory education, two nationally representative surveys (one of local school districts and one of Chapter 1 schools and teachers), and five sets of case studies--state and local administration of Chapter 1, targeting practices used in the Chapter 1 program, school district program design decision-making in Chapter 1, the whole-day instructional experiences of Chapter 1 students, and an examination of how school districts allocate Chapter 1 resources.

2. The findings of this study are reported in Goertz (1987).

3. In the early days of Title I, Program Guide #44 offered two concentration standards: (1) the total per-pupil expenditure for compensatory education service should equal about one-half the expenditure per child from state and local funds for the regular school program; and (2) "the ratio of project staff to the number of children to be served should be high enough to provide concentrated individualized services." Chapter 1 and the Nonregulatory Guidance to SEAs do not include any such dollar or educational effectiveness standards. Rather, a state's determination of whether a district's Chapter 1 program meets the "size, scope and quality" provision may be based "in part, on the LEA's assessment of the needs of children in its project areas...and the SEA's standards for the effective and efficient use of Chapter 1 funds in ways that meet those needs" (Section 9, Nonregulatory Guidance to SEAs, 1983).

4. Breadth and intensity of Chapter 1 services are complicated outcomes to measure. Because of data limitations, we settled on the following measures. The relative breadth of services is the percentage of Chapter 1 participants in a district related to its poverty rate. Intensity of service is the average case load for Chapter 1 staff in a district. Staff are counted on a full-time equivalent (FTE) basis and 2.5 FTE aides are considered the equivalent of one FTE teacher.

5. In response to a request from a state for guidance about this, however, the U. S. Department of Education suggested the following in a 1985 letter to the state:

> The services provided to the public school children who

are selected to participate should be based on an analysis of their needs, and funds then allocated to best meet those needs. One way to do so is to ensure that Chapter 1 per pupil expenditures are roughly the same among schools; another would be to ensure that the Chapter 1 pupil-to-teacher ratios are roughly the same. However, the LEA could find that the dollar levels may need to vary at certain schools to meet needs for certain services that are not needed at other schools.

In allocating resources to participants in private schools, however, districts are required to ensure that expenditures for participating children in private schools are "equal" for public and non-public school students, taking into account the number and special educational needs of such children.

6. The four measures of Chapter 1 resources were defined in the following way:

- Number of Chapter 1 projects in a school. Projects are distinct instructional modes for service delivery within a content area, such as an elementary reading pull-out project. Projects were differentiated using three criteria: grade level (pre-kindergarten, kindergarten. elementary, middle or junior high school, high school); subject matter (reading, mathematics, bilingual/ESL, other); and setting (in-class, limited pull-out, extended pull-out, add-on, replacement, other).

- Number of Chapter 1 staff. The total number of FTE staff funded by Chapter 1 funds (or in a multi-funded program by both chapter 1 and state and/or local compensatory education funds), where 2.5 FTE aides equal 1.0 FTE teacher. Staff supported by local contributions to replacement projects are not included.

- Average case load. The number of Chapter 1 participants (duplicated count) in a school divided by the number of Chapter 1 staff as defined above.

- Per pupil expenditure. Total salaries and benefits paid to Chapter 1 staff divided by the number of Chapter 1 participants (duplicated count).

7. The four measures of educational and economic need in Chapter 1 schools were:

- Level of poverty. The percent of the school's student body in poverty, as used by the district to select schools for participation in the Chapter 1 program.

- Achievement of Chapter 1 participants. The average achievement of Chapter 1 participants in one grade per grade span in each school on a reading and/or mathematics pretest.

- School-wide achievement. The average achievement of all students in one grade per grade span (usually a grade where the state required testing) in each Chapter 1 school.

- Concentration of Chapter 1 students. The number of Chapter 1 participants in a school as a percent of total school enrollment.

8. For purposes of this discussion, SCE refers only to those state or local compensatory education programs designed to meet the legal standards for special, favorable treatment under Chapter 1. The most important standards require that SCE services be designed to meet the special educational needs of educationally deprived children and that they supplement regular state and local educational services.

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